

# Lean Poster Series #15

## Pull Schedule - Just in Time

### What is Pull System?

Pull refers to the action of the customer pulling the added value activities through the process to receive goods or service how and when needed.

In a Pull System, production and distribution are demand-driven rather than to forecast (Push System). Pull is part of Just-In-Time and the Toyota Production System, where limited inventory is kept on hand and is replenished as it is consumed. Kanban is used to signal the need to replenish inventory.

### Key concepts in Pull System

- Just-In-Time System: to finish a hundred cars today, we pull in the parts we need just in time to be able to be ready to assemble them.
- This leads to reduced inventory (elimination of waste)
- We need close relationships with the suppliers, so that they deliver consistently just at the right moment.
- As part of this, the concept of Jidoka and identification of defects at the source where they arise is very important.

### Lean Train

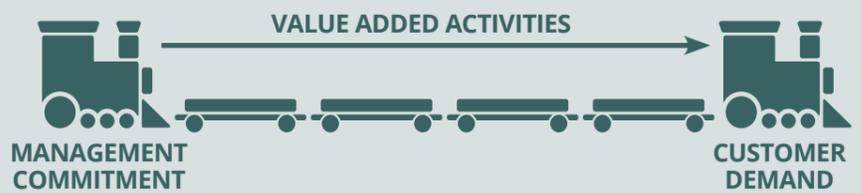
#### TRADITIONAL APPROACH

In traditional manufacturing or service processes, the value added activities are being pushed through the organization. This is typically a constant scheduled push. The customers might want it at that speed, or they might want it at a much slower or faster speed.



#### LEAN TRAIN

In Lean, the value-added activities are being pulled through at the speed of customer demand. Management commitment is key to enable the supply to react to the speed of customer demand, rather than to a forecast.

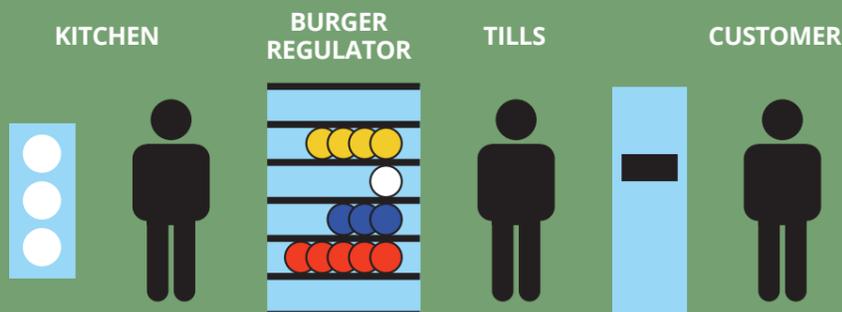


### Pull System Examples

Pull production can be achieved by using the Kanban system and Kanban - Supermarket System. A production line can be set up so that customer orders can be quickly satisfied when they are made and the parts either manufactured to order from standard components or drawn from a small buffer stock and then replenished in the same way a supermarket will refill the shelves as customers buy products.

#### KANBAN EXAMPLE: FAST FOOD RESTAURANT

Fast food is not made to forecast and pushed to a customer. When the customer orders a burger, it will be taken from the burger regulator. This is a Kanban sign to the kitchen to replenish the stock.



#### KANBAN EXAMPLE: SUPERMARKET KANBAN

A small stock of every item is displayed on the shelves, a location with a fixed space allocation. Kanban signals can come from checkout scanners or can be manual whereby a store clerk deduces from empty spaces what has been sold. A signal goes to the regional warehouse, which prepares a daily replenishment of the exact items sold.

